PLANT IMMIGRANTS.

No. 142. FEBRUARY, 1918.

GENERA REPRESENTED IN THIS NUMBER.

Plates:

Foreign Seed and Plant Introduction.

EXPLANATORY NOTE.

This multigraphed circular is made up of descriptive notes furnished mainly by Agricultural Explorers and Foreign Correspondents relative to the more important introduced plants which have recently arrived at the office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture, together with accounts of the behavior in America of previous introductions. Descriptions appearing here are revised and published later in the INVENTORY OF PLANTS IMPORTED.

Applications for material listed in these pages may be made at any time to this Office. As they are received they are placed on file, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it as well as to others selected because of their special fitness to experiment with the particular plants imported. Do not wait for the annual catalogue entitled NEW PLANT INTRODUCTIONS which will be sent you in the autumn and in which will be listed all plants available at that time. Regular requests checked off on the check list sent out with the catalogue are not kept over from year to year. If you are especially interested in some particular plant in the catalogue write and explain in detail your fitness to handle it.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.

David Fairchild,

Agricultural Explorer in Charge.

January 2, 1919.

Annona cherimola x squamosa (Annonaceae), 45571. **Atemoya**. From Lamao, Bataan, Philippine Islands. Presented by the Director, Bureau of Agriculture, Manila. No.12. This cross has produced a hybrid, the fruit of which is small, and weighs on an average 175 grams, with a length of 65 millimeters and a transverse diameter of 60 millimeters. The shape of the fruit is cordiform, regular, and the carpels end in a more or less pointed protuberance. The surface is green with reddish dots on the sun-exposed side, and is covered by a white bloom. The skin is quite thick and tough. The pulp is white, juicy, sweet, faintly aromatic, and devoid of the cherimoya flavor, but of good quality. (Adapted from Wester, Philippine Agricultural Review, Third Quarter, 1915.)

Aralia chinensis mandshurica (Araliaceae), 45573. From Jamaica Plain, Mass. Presented by the Arnold Arboretum. This is a small hardy tree from Japan, resembling *Aralia spinosa* (Hercules' Club), but it is more treelike, has fewer spines, and does not sucker, which makes it a much more desirable lawn tree. It does not form many branches, but the large bi-pinnate leaves cast a good shade. The greenish white flowers are borne in large panicles, and the berries are dark red when ripe, producing a very pleasing effect. Like all other aralias, this one grows freely from pieces of root. (Adapted from The Florists' Exchange, November 6, 1915.)

Bursera sp. (Burseraceae), 45577. **Copal**. From Guatemala. Collected by Mr. Wilson Popenoe, Agricultural Explorer for this Department. "(No. 218a. Guatemala, Guatemala. November 22, 1917.) One of several species which furnish the copal gum so extensively used in Guatemala as incense. The burning of this incense in religious ceremonies is a custom which has come down from the earliest times, and is still practiced, mainly by the Indians. The gum is obtained by making incisions in the bark of the tree which is rather small in size and is common in the highlands, both wild and cultivated." (Popenoe.)

Camoensia maxima (Fabaceae), 45608. From Cienfuegos, Cuba. Presented by Mr. R. M. Grey, Harvard Experiment Station. This vine, which adorns the tops of lofty trees in tropical Africa, bears probably one of the largest and most beautiful flowers in the world. It is the largest flowered legume. The deliciously

fragrant flower ,8 to 12 inches in length, has petals of pure white delicately margined with gold which becomes old gold with age; and is borne in pendulous clusters of nearly a dozen individuals each. One drawback to the cultivation of this plant is that it has been extremely slow in coming into bloom, only blooming in hothouses of considerable size. Regarding the possibilities of this plant in the United States, Mr.George W. Oliver, Propagator to the United States Department of Agriculture, states, "Very likely this plant will flower oftener and more profusely in this country than in Europe, particularly England, because of our higher summer temperature, which enables the plant to grow rapidly and ripen its wood." (Adapted from The Garden Magazine, May 1908; Oliver, Flora of Tropical Africa; and C. F. Baker, American Breeders' Magazine Vol. IV. p.213. "The Camoensia vine is growing in rather clayey soil with a reddish rotten-stone subsoil, on a dry situation but gets abundant water during our wet season and is occasionally watered during the winter or dry season, but stands considerable drought without injury. The vine is fully exposed to sun part of the time. It will grow in full sun, also in full shade, but makes more luxuriant foliage where partly shaded. The long branches, 10 to 12 feet, in length, always seek the open before blooming. Flowers are produced several times annually, but seed is produced more freely during the summer. When ripe, the pods split with great force (enough to tear thin cotton cloth with which they are often covered to protect the seed from scattering) and throw the seed 30 feet or more away from the plant. I believe the plant could be acclimatized in the hammocks of southern Florida with but little or no trouble, and the natural distribution of its seeds would cause it to spread rapidly. It would certainly be worthy of trial." (Grey.)

Casuarina sumatrana (Casuarinaceae), 45659. From Buitenzorg, Java. Presented by the Director, Botanic Garden. Introduced as a tree having more style to it than *Casuarina equisetifolia*. It forms a larger and more graceful tree than the latter which, unfortunately, has been so commonly used as a street tree in Florida. Its hardiness will have to be tested." (David Fairchild.)

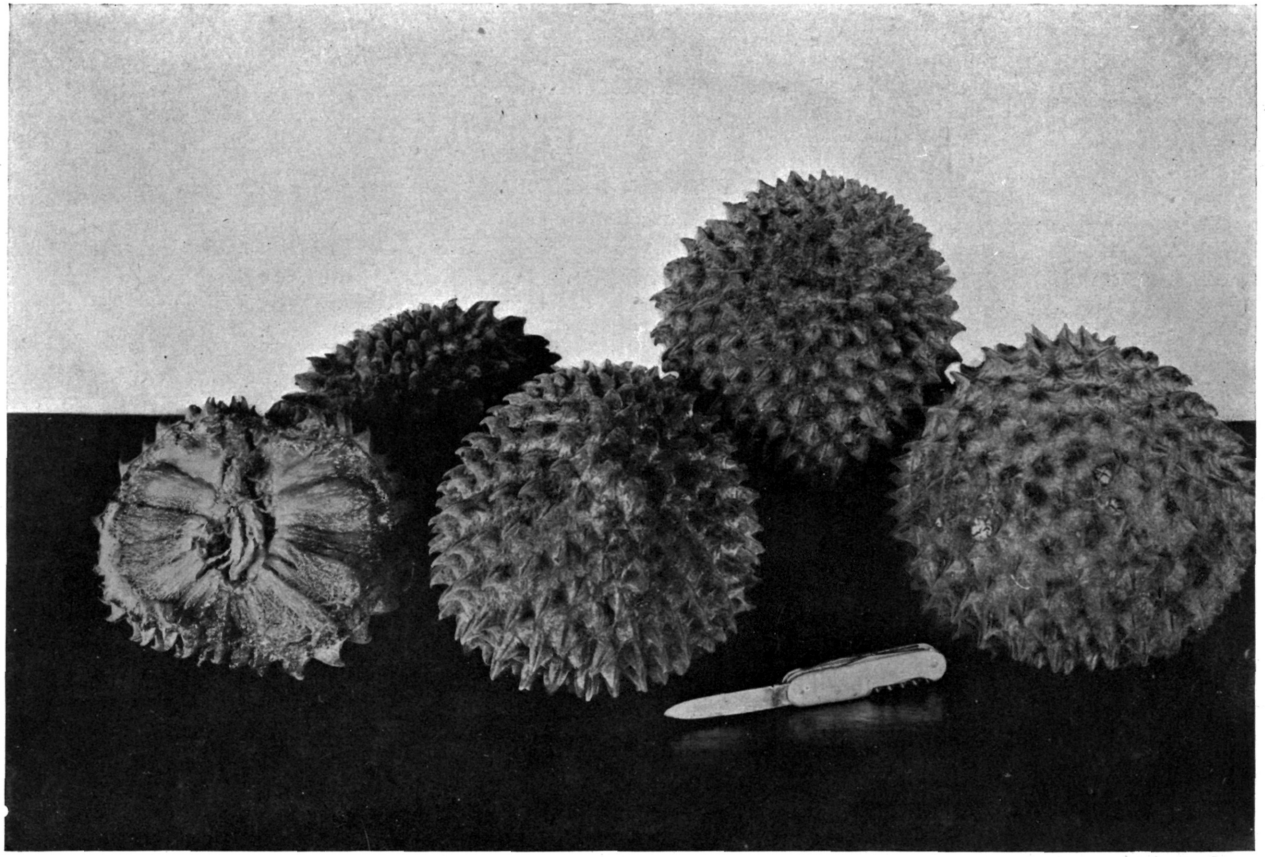
Lansium domesticum (Meliaceae), 45616. **Langsat.** From Manila, Philippine Islands. Presented by

Mr. Adn. Hernandez, Director, Bureau of Agriculture. "This, like the mangosteen, is a delicious Oriental fruit not yet well established in America. While it is not as famous as the mangosteen, it is highly esteemed throughout the Malayan region and is praised by many travelers. Judging from our limited experience with it, the **langsat** is slightly hardier than the mangosteen, and there seems to be no reason why it should not succeed with us. A few plants have been grown in the West Indies and other parts of the American tropics, but I have yet to hear of its fruiting outside the Orient. The **langsat** has two allies in America: one the well-known umbrella tree (*Melia azedarach*) of the United States; the other the tropical mahogany (*Swietenia*). The genus Lansium, to which the **langsat** belongs, is a small one; and is the only one cultivated for its fruit. The duku, a fruit closely resembling the **langsat**, is commonly considered a botanical variety of *L. domesticum*. The tree is rather slender in habit, with a straight trunk and compound leaves composed of 3 or more pairs of elliptic to obovate leaflets 3 or 4 inches in length. The fruits, which ripen in the Straits Settlements from July to September, are produced in small clusters; in general appearance they suggest large loquats, the surface being straw-colored and slightly downy. The skin is thick and leathery and does not adhere to the white translucent flesh which separates into 5 segments. Each segment normally contains an oval seed, but some of the segments in each fruit are usually seedless. The flavor is highly aromatic, at times slightly pungent. The fruit is commonly eaten while fresh but it is said also to be utilized in various other ways. The name **lanzon** is applied to this fruit in the Philippine Islands, **langsat** or **langseh** being the form used in the Malay Peninsula." (Wilson Popenoe.)

Passiflora ligularis (Passifloraceae), 45614. From Caracas, Venezuela. Presented by Mr. H. Pittier. "Unquestionably one of the best of the **granadillas**. In Guatemala it is common at elevations of 4,000 to 7,000 feet, but I have never seen it in the lowlands; it appears therefore, that it is adapted to subtropical climates, and judging from its presence in portions of Guatemala almost too cold for the avocados, I feel that it ought to succeed in California. The behavior of other species, such as *P. edulis*, in that state indicates that conditions in general are favorable to the passifloras, and the question has generally been one

of hardiness. Many species tested in California have proved to be too tender. *P. ligularis*, with slight protection during the first winter or two, certainly ought to thrive in the southern half of the state. "In Guatemala it is a rampant climber, scrambling over trees and buildings, and covering them with a canopy of green. It goes to the tops of trees 35 to 40 feet in height. Its foliage is bold, the large, cordate leaves being as much as 6 or 8 inches in length. The ripening season commences in early fall and extends through the winter. Large plants bear abundantly, yet I have never seen a vine so laden with fruits as some of the plants of *P. edulis* which grow in California gardens. The fruits are commonly 2½ inches in length and deep orange-yellow in color. Sometimes a purple-fruited variety is seen. The brittle outer shell or pericarp, when broken away at one end, exposes the small elliptic seeds individually enclosed in juicy white aril. The aroma of the fruit is delightful; it may properly be termed perfumed. The flavor is equally pleasant, and unlike many other passifloras is not unduly acid. The fruit is commonly eaten out of hand, for which mode of use it seems best adapted. One can consume a large number of them without any ill effects. The fruits are often brought into the markets of Guatemala upon the backs of Indians from distances of 100 miles. The pericarp is so tough that it is not easily bruised, hence the fruit can be transported without difficulty. It is attractive in appearance, and so popular in Guatemala that it realizes higher prices in the markets than the majority of other fruits which compete with it. The term **granadilla** (diminutive from **granada**, Spanish for pomegranate) is applied in tropical America to the fruits of various passifloras. It is an attractive name, and it seems desirable to retain it, but an additional word is necessary to distinguish between the various species. The one under consideration might well be called the **sweet granadilla**." (Wilson Popenoe.)

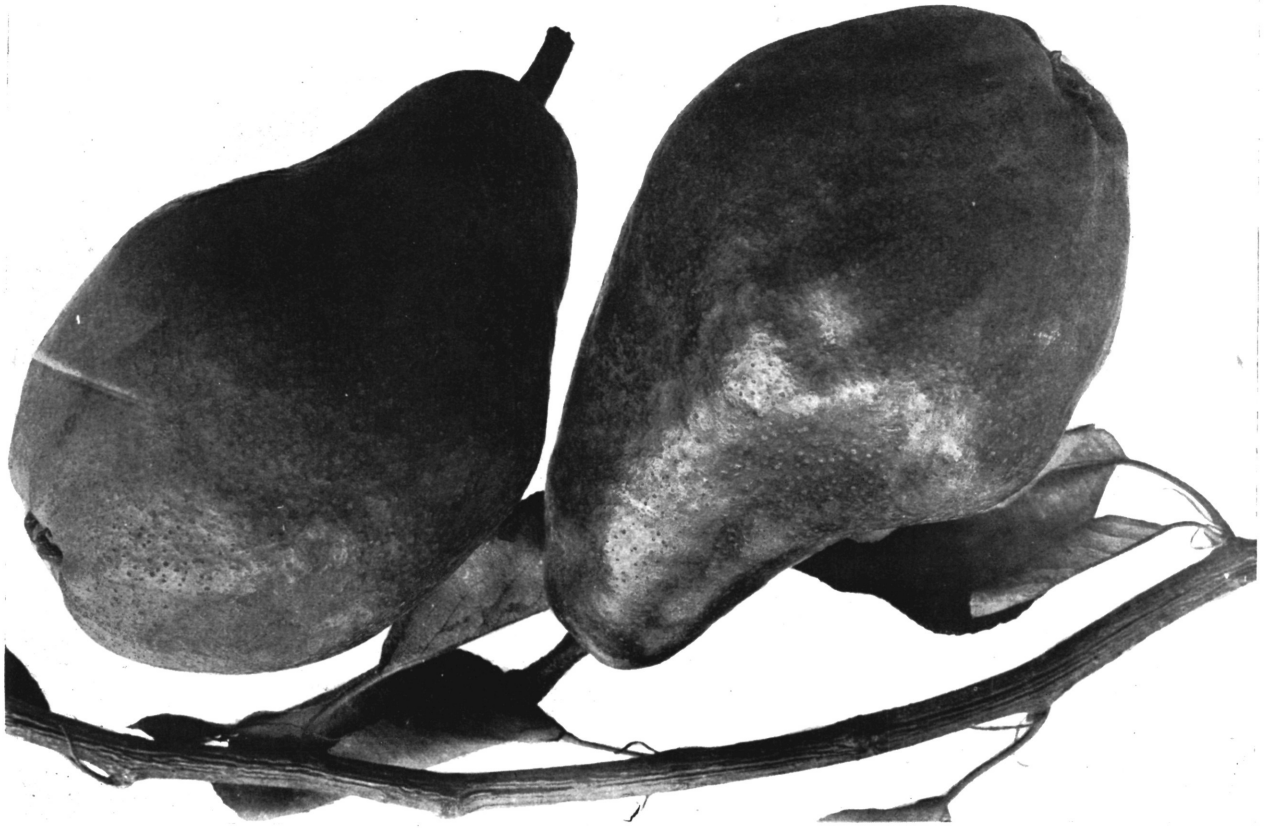
Persea americana (Lauraceae), 45562. **Avocado**. From Guatemala. Collected by Mr. Wilson Popenoe, Agricultural Explorer for this Department. "(No.214. Avocado No. 34. **Ishim**. November 20, 1917.) From the terreno of Ignacio Hernandez, at San Lorenzo del Cubo, near Antigua. While most avocados in the Antigua region do not ripen their fruits until February or March, this one matures its entire crop by the end of November. It can be considered, therefore, a very early variety,



FRUITS OF THE SONCOYA.

(*Annona purpurea.* See S. P. I. No. 43426.)

This immense anona is common in Guatemala, both wild and cultivated. Its prickly fruits are as large as a child's head, often weighing 3 pounds or more. The flesh is bright orange in color and has the flavor of the North American papaw (*Asimina triloba*). It is sometimes avoided by the Guatemalans because of the current belief that it causes malarial fevers. (Photographed by Wilson Popenoe, at Escuintla, Guatemala, September 22, 1916; P16792FS.)



A NEW HYBRID CHINESE-EUROPEAN PEAR.

(See S. P. I. No. 43442.)

The result of a cross made by Dr. Walter Van Fleet at his place in Little Silver, N. J., in 1907, between varieties of the oriental pear (*Pyrus chinensis*) and the European pear (*Pyrus communis*). The exact varietal parentage has been lost. It is an attractive variety, somewhat resembling the Bartlett in appearance, but with a deep red cheek on yellow ground. The flesh is fine grained, tender, and juicy, with but few granules. The flavor is sweet and pleasant, and it may be classed as of very good quality and possibly of value for canning purposes. (Photographed by R. L. Beagles, Plant Introduction Field Station, Chico, Cal., September 14, 1915; P21160FS.)

and as such is worthy of a trial in California, where early varieties of the Guatemalan race are needed. Its only visible defect is its somewhat large seed. The quality is good and the fruit is attractive in appearance. This location is not sufficiently high to experience cold weather, hence the variety must be assumed to be of average hardiness for the Guatemalan race until it can be given a trial in the United States. The productiveness of this variety is somewhat in doubt. The crop harvested in 1917 was not large. The tree bloomed heavily in December and was setting a good crop when last seen. The season of ripening extends from October to the first of December. Probably the fruits would remain on the tree later than December if given an opportunity to do so, but as avocados are very scarce at this season of the year they are picked as soon as mature. The form of the fruits, pear shaped to obovoid, is attractive, as is the deep maroon color which they assume upon ripening. They are of convenient size, about 12 ounces, and the flesh is yellow and of good quality. The seed is larger than in the best late varieties, but not unreasonably large. It is tight in the cavity." (Popenoe.)

Pyrus calleryana (Malaceae), 45592. **Wild pear.** From China. Collected by Mr. Frank N. Meyer, Agricultural Explorer for this Department. "(No. 2453a. Kingmen, Hupeh, China. October 1917.) Over 100 pounds of seed of a small-fruited wild pear which has proven to be highly resistant, but not totally immune to fire-blight in the innoculation experiments of Professor F. C. Reimer at Talent, Oregon. This pear grows in a variety of habitats, as at the edges of ponds, in dense thickets, on rocky mountain slopes, in crevices, etc. It is used by the Chinese as a stock for improved pears, and seems to make a good union. When left alone it grows into a large tree reaching an old age. Where this pear occurs around Kingmen, *Pyrus betulaefolia* also is found and, since it resembles *P. calleryana* to a striking degree, it is impossible, when collecting a large number of fruits, to keep it out entirely. There is, therefore a certain percentage of seed of this pear mixed with that of *P. calleryana*. As *P. betulaefolia* is highly susceptible to blight, rogueing in the seed beds or nursery plantings of *P. calleryana* should be carefully done. To insure pure seeds for future stock purposes, groves should be set out here and there, away from other species and varieties of pears, so as to minimize

hybridization, and in localities where spring frosts are of rare occurrence. Where *Pyrus calleryana* occurs wild one finds it associated with the Chinese pistache, the jujube, *Ligustrum lucidum*, *L. quihoui*, *Xylosma racemosum*, *Celtis sinensis*, *Ulmus parvifolia*, *Pinus massoniana*, *Vitex negundo*, *Cudrania tricuspidata*, *Phyllostachys sp.*, *Poncirus trifoliata*, *Zanthoxylum alatum*, etc. In gardens with it, one finds cultivated *Osmanthus fragrans*, *Meratia praecox*, *Paulownia tomentosa*, Ichang lemon, grapefruit, mandarin orange, flowering cherry, raisin tree, loquat and others. The fruits of *Pyrus calleryana* when ripe become soft and assume a brown color, while those of *P. betulaefolia* also become soft and turn quite black. When not soft, however the fruits of the two species cannot be separated when once mixed, unless there are leaves attached to them. Chinese name **Yeh tang li** (Wild crab apple pear)." (Meyer.)

Saccharum officinarum (Poaceae), 45611. **Sugar cane.** From Trinidad, B. W. I. Presented by the St. Clair Experiment Station, Department of Agriculture. **Louisiana 511**, one of the sugar cane seedlings tested in 1908 at the Louisiana Sugar Experiment Station at Audubon Park, New Orleans, is particularly noteworthy because of the unusually high sucrose content (16.3 per cent) for Louisiana conditions. The parent cane was **Trinidad 189**. (From a paper by H. P. Agee, in the Louisiana Bulletin No. 127, May 1911.) "The success of seedling canes raised in Louisiana from imported Trinidad seed may make the reintroduction from that same island of seed produced by the Lousiana selected cane of special interest to sugar cane breeders." (Fairchild.)

Stadmannia oppositifolia (Sapindaceae), 45663. From Port Louis, Mauritius. Presented by Mr. G. Regnard. A large hardwood tree, once frequent in the primeval forests of the island of Mauritius but now becoming scarce, with alternate, pinnate leaves; dense panicles of inconspicuous flowers; and hard, spherical fruits nearly an inch in diameter. (Adapted from Baker, Flora of Mauritius.) The fruits make an excellent jelly, very much like that of the quince. This tree grows in a wild state, and the pulp of its fruit, unless made into a jam or jelly, is only fit to be eaten by monkeys." (Regnard.)

Vanilla pompona (Orchidaceae), 45669. From Zacuapam, Vera Cruz, Mexico. Presented by Dr. C. A. Purpus. "Wild vanilla which grows in brush-woods, and half-shady places in the low country at the limit of the Tierra caliente. Should be planted at the foot of small trees or large shrubs in leaf mold." (Purpus.) "A native of Mexico, yielding an inferior quality of vanilla known by the name of 'Vanillon' and 'Vanilloes'. This is claimed to have advantages over proper vanilla, its pods not having a tendency to split, as well as being easily cured, whilst the vines are said to flower and fruit 3 or 4 times during the year." (MacMillan, Tropical Gardening and Planting.)

Ziziphus mauritiana (Rhamnaceae), 45625 to 45658. From Port Louis, Mauritius. Presented by Mr. G. Regnard. "If the Ziziphus trees are not cultivated in the strict sense of the word, they are, however, found in large numbers in the villages inhabited by Indians and Africans, in the warmer localities of the island, and the fruits are well appreciated not only by those people, but also by Europeans and they are sold in great quantities in the fruit markets during June, July and August (the cold season). On having fruits gathered from different trees, I have noticed that there are many varieties, probably more than one hundred, of different size, shape, taste and color. The fruits on ripening may be green, pink, red or yellow. The majority is of a certain shade of yellow. When over-ripe, that is when the fruit softens all the fruits have the same uniform yellowish-brown color. The fruits are eaten before they become what I call, "over-ripe", and except for some varieties have a very good taste. Usually those fruits which have the lower extremity slightly pointed are considered to be the best, but this is not always the case. The tree rarely attains more than 20 feet in height, with a trunk 6 to 8 inches in diameter. It grows all around the island, from the sea level to 500 to 600 feet elevation, but it appears, with a few exceptions, that the best products are obtained from the regions where the heat is more regular, because they are sheltered from the winds which blow during most of the year from the southeast." (Regnard.)

OBITUARY.

Frank N. Meyer, the Agricultural Explorer of China and Turkestan, is dead. The following cablegrams received through the State Department from the American Consul in Nanking contain all the information which we now have about his death - perhaps they are all we shall ever know about the last hours of this remarkable man:

"June 4, 1918.

"Frank Meyer, Department Agriculture, disappeared from a steamer in this consular district en route Hankow to Shanghai, June 2nd."

"June 7, 1918.

"Yours June fifth. Proceeding with Chinese up river to search for Meyer. Steamer captain states Meyer normal but complained of headache. Have telegraphed Legation and requested Swingle come to Nanking to assist in search."

"June 9, 1918.

"Found Meyer's body thirty miles above Wuhu."

Mr. Meyer had endeared himself to all those who came to know him, because of his real interest not only in plants but in the building up of the human race and the work of making the world more beautiful for that race to live in.

It is hard to realize that those facinating letters from dusty inns, Buddhist temples and river steamers will cease. We shall receive no more of the characteristic cloth packages addressed always in his own handwriting and containing carefully packed and carefully labelled packets of seeds or cuttings. Unlike the work of most travelers, whose stories cease with the writing of a book of travel, Frank Meyer's work had a concreteness about it which the making of books can never quite approach; for the things which he brought us are scattered all over this country, and other countries as well, - growing into avenues, orchards, forests, hedgerows, broad cultivated fields and flowering borders, and thousands of men and women own them and appreciate them and some will perhaps make a living out of them.

It is when I think of the rare pleasures which were in store for Meyer in the evening of his life, watching these plants of his become more important every year, that the tragedy of his early death seems keenest. He might have wandered under avenues of his Chinese pistache, or rested under the shade of his dry-land elm, or strolled through orchards of his Fei tcheng peach; the earliest ripening cherries in America he might have picked from trees in this country grown from scions he secured in Tangsi, and he might have gathered hardy walnuts from his Manchurian walnut trees, or sweet chestnuts from his blight resistant chestnut trees: he might have eaten candied Chinese haws, or bought in our markets delicious Chinese jujubes grown in large orchards in California and our Southwest. How each industry, each successful introduction would have brought to his mind the incidents of its discovery and given him a thrill of satisfaction over a difficult work which was destined to enrich the horticulture of the whole world!

But there is another side than that of the personal loss which we all feel on reading the brief cables that, flashed around the world, tell of the ending of Meyer's work. It is the realization of the greatness of the loss to the horticultural world.

It was in the work of ferreting out the details of the culture and proper handling of the thousands of his introductions that Meyer excelled, and now all this gathered plant lore from which we had expected to draw in years to come is gone. His notes were remarkable characterizations of the uses and cultural requirements of the plants he studied, and are in themselves distinct contributions to the horticultural literature of today; but they are very little compared to what he could have told us himself.

Frank N. Meyer was born in Amsterdam, Holland, and from boyhood he showed a love of plants and a lust for travel. He used to tell us how he walked over the Alps into Italy to see the orange groves there and then walked back again. For several years he was the Assistant in the Amsterdam Botanical Garden and was closely associated with Hugo de Vries during the years when the latter was writing his book on Mutations. Coming to America with letters from Professor de Vries and from the Dutch poet Van Eden, he began working in the greenhouses of the Department. His craving for travel caused him, however, to wander to California, and through Mexico and back on foot; later

he found his way to the Shaw Botanical Gardens in St. Louis. It was here that the Department found him when, after months of search after the right man to send to explore China, it had almost despaired of finding anyone who combined an insatiable thirst for travel and the ability to walk long distances over trails and across country, with an extensive acquaintance with wild plants, a good knowledge of horticulture, and an absorbing and sustaining interest in the work of plant introduction.

Meyer came into the Office of Foreign Seed and Plant Introduction in July, 1905, and was sent almost immediately to China, where he spent three years. Upon his return he spent one year in America and then went out to Chinese Turkestan, where he traveled for three more years and again returned to America. His third trip was into northwestern China and to the borders of Tibet, and he was gone on this trip three years. After another year spent in America, he again returned to China in 1916 and had nearly completed his second year there when death overtook him.

He introduced during these years of collecting over 2,000 species and varieties of plants; and these are in the main described in the Inventories of the Office. There are on file thousands of record cards which give exact data as to the whereabouts and behavior of the plants which he brought in as seeds or cuttings.

Meyer's field work is done, and whether his body rests beside the great river of China or under some of the trees he loved and brought to this country will matter little to him. He will know that throughout his adopted land there will always be his own plants, - hundreds of them, – on mountain sides, in valleys, in fields, in the backyards and orchards of little cottages, on street corners, and in the arboreta of wealthy lovers of plants. And wherever they are they will all be his.

David Fairchild

The following letter was the last received from Mr. Meyer; and since it is so characteristic and contains so much information on the agricultural situation, it was felt that our cooperators would be interested:

"At last I have been able to break through the lines around Ichang and walked to Kingman, got the stored seeds and baggage there and settled the payments for the pear seeds; then we marched down to Shasi and took a steamer from there and arrived here on the 15th. We were held up a few times and some unpleasantries were indulged in, but on the whole we could have fared far worse. Of course we passed through villages that had been looted and burned and food was hard to obtain, but to an old hand out here, like myself, these things have so often been encountered that one is used to them.

"I did not write you from Ichang of late, because I was not sure that I really could make the trip. The whole country is so fearfully upset that travel has become a perfect gamble. Sometimes travelers get through, but often they have been held up for days and weeks. From Ichang westward all traffic is stopped and products from Szechuan do not come through any longer for months and months. The losses the people at large suffer must be gigantic; right now tung-oil does not reach Hankow any longer, neither do hides, drugs, silks, etc.

"Well, personally I am awfully glad that I got away from Ichang; the situation began to depress me. One cannot live for months in an atmosphere of suspension without feeling the effects. And as I had cheerless, uncomfortable quarters and lack of substantial food at times, one had both mental and physical discomforts.

"Well, I just received your very sympathetic letter of February 26. Uncontrollable forces seem to be at work among humanity, and final results, or possibly purposes, are not being revealed as yet, that is, for so far as I can look into this whole titanic cataclysm.

"Now concerning my own plans, of which you want an outline by about the first of July - well, I can say this, that my ideas are to leave here within a day or two, visit Kiukiang for tung-oil plantations which have been set out nearby, then go down to Nanking possibly, and from there to Shanghai, where I may stay

many weeks, shipping off seeds and specimens. Then when the heat gets too intense, I may move up to some quiet place on the coast of Shantung and work up the herbarium specimens I have collected these past 18 months. When chestnuts commence to come in by the end of September or early October, I may purchase several hundreds of pounds and ship them, and possibly seeds of *Pyrus ussuriensis* might be brought to us. I shall now try to answer various items which your many letters contain:-

"Your item of putting 300 acres in soy beans at Yarrow interests me greatly. It shows how food supplies slowly crowd out mere ornamental propositions.

"Concerning my giving you a careful analysis of Chinese food situations - Well, as you realize, China is a big land and feeding the multitudes presents problems that are at times purely local. As a whole, however, I can say that from my personal observations I can testify that here in Central China, rice forms three-fourths of the total amount of food the ordinary people take in; meat and fish supply a mere fraction and the rest is taken in the form of beans, peas, lotus-rhizomes, various roots and tubers and in leafy vegetables, the last in bulk often looking predominant, but being only coarse matter, really amount to a small percentage of the total.

"Concerning Dr. McCollum's idea that leafy green vegetables are essential in the human diet, well, this is a mooted question. The Russians at large use but few leafy herbs and thousands of cowboys, especially in the Argentine, live on an almost pure meat diet. Of all the leafy greens, the Chinese love especially those belonging to the cabbage and mustard group; it seems that the race has found out that they supply some essential factors. Spinach also is in great demand but it is a much dearer vegetable than various cabbages.

"Concerning Chinese substitutes for dairy products, well, the 101 different manufactures of the soy bean supply this protein, but I must admit that it will take some time for the white races to acquire a taste for the very large majority of these products. We are still at it, but being without an interpreter I don't find out as much as I would like.

"I am glad to notice your statement regarding the Feitcheng peach. And having come true from seed certainly surprises me.

"Concerning curd made from acorns, I have not come across it yet; it seems to be rather a country product.

"Concerning obtaining quantities of *Davidia involucrata*, it seems that the tree is especially abundant south of Patung, but with all the fighting going on there no one knows what time a collector could travel in that district.

"Concerning similarity of fruits of *Pyrus calleryana* and *P. betulaefolia*, well, that has been some problem. I found out that the first, when fully ripe, turns into a brown color and the last becomes black. However, when natives bring in several thousands of pounds of fruits and not all entirely ripe then you may realize what a job we had in trying to separate the two kinds.

"Growing Chinese yams for flour production in America; well, the digging of yams is a very laborious process and right here they are really in the nature of a luxury. This whole hunting for new food products is really a trying situation. So much experimenting is needed to establish a new crop that often a person's whole life might have to be devoted to it.

"I think that soy bean flour might come to the front and all sorts of beans should be tried, especially in the Southern States.

"Your very sympathetic remarks are surely appreciated by me. Times certainly are sad and mad and from a scientific point of view so utterly unnecessary.

"Well, later on I'll answer more correspondence from you and from others in our Office.

"With kindest regards to you all, I remain,

"Very sincerely yours,"

(Signed) Frank N. Meyer.

c/o American Legation, Peking, China.

United States Department of Agriculture.
Bureau of Plant Industry.
Office of Foreign Seed and Plant Introduction.
Washington, D. C.

Washington Scientific Staff.

David Fairchild, Agricultural Explorer in Charge.
P. H. Dorsett, Plant Introducer, in Charge of Plant Introduction Field Stations.
B. T. Galloway, Plant Pathologist.
Peter Bisset, Plant Introducer, in Charge of Foreign Plant Distribution.
Wilson Popenoe, Agricultural Explorer.
H. C. Skeels, G. P. Van Eseltine, and R. A. Young, Botanical Assistants.
D. A. Bisset, Miss Bessie Broadbent, E. L. Crandall, L. G. Hoover, R. N. Jones and P. G. Russell, Assistants.
Edward Goucher, Plant Propagator.

Field Stations Scientific Staff.

R. L. Beagles, Superintendent in Charge, Plant Introduction Field Station, Chico, Cal.
E. O. Orpet, Assistant in Plant Introduction.
J. M. Rankin, Superintendent in Charge, (Yarrow) Plant Introduction Field Station, Rockville, Md.
Edward Simmonds, Superintendent in Charge, Plant Introduction Field Station, Miami, Fla.
J. E. Morrow, Superintendent in Charge, Plant Introduction Field Station, Brooksville, Fla.
Henry E. Juenemann, Superintendent in Charge, Plant Introduction Field Station, Bellingham, Wash.

Collaborators.

Mr. Aaron Aaronsohn, Haifa, Palestine.
Mr. Thomas W. Brown, Cairo, Egypt.
Mr. H. M. Curran, Laurel, Md.
Mr. M. J. Dorsey, University Farm, St. Paul, Minn.
Mr. Robt. H. Forbes, Tucson, Ariz.
Mr. A. C. Hartless, Saharanpur, India.
Mr. Barbour Lathrop, Chicago, Ill.
Mr. H. Nehrling, Gotha, Fla.
Mr. Charles Simpson, Littleriver, Fla.
Mr. H. P. Stuckey, Experiment, Ga.
Dr. L. Trabut, Director, Service Botanique, Algiers, Algeria.
Mr. H. N. Whitford, School of Forestry, New Haven, Conn.
Mr. E. H. Wilson, Arnold Arboretum, Jamaica Plain, Mass.
Dr. F. A. Woods, Washington, D. C.